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The IEN has established the following guidance and support to assist you in transitioning your video teleconferencing (VTC) codecs from the IEN to a new Internet Service Provider (ISP) for the service period from now to June 30, 2015.

STEP 1:

Select your new Internet Service Provider (ISP): Select your new ISP in accordance with local district procurement policy and the requirements of [House Bill 168](#).

STEP 2:

Identify/obtain new public IP addresses: Ensure that you request one (1) public IP address for each VTC codec in your district from your new ISP.

STEP 3:

Communicate your new ISP plan to IEN staff: Fill out the [Google Form](http://goo.gl/forms/Kr1esyIMPX) (<http://goo.gl/forms/Kr1esyIMPX>) and provide the following information:

1. School district name
2. Technology director name, email address, and phone number
3. School-selected Internet Service Provider, point of contact, email address, and phone number
4. Transition date (from state network to school-selected provider)
5. Amount of public Internet purchased (in Mbps)
6. New public IP addresses to be used (If your district has multiple VTC systems, please associate each IP address with a specific VTC.)

IMPORTANT: In order for us to best assist you and to minimize VTC usage disruptions, please do not transition to a new ISP before you contact the IEN VTC Transition Team.

STEP 4: You will be assigned an IEN VTC Transition Specialist: You will be assigned an IEN VTC Transition Team Specialist ("IEN Specialist") who will help coordinate the transition of your VTCs to your new ISP.

STEP 5: Your IEN Specialist will open an ENA trouble ticket to electronically verify which of the three VTC/IP address configurations currently exist for your district's VTC/IP configuration.

1. **Configuration 1:** Your VTC codec(s) is connected directly into the ENA Router and has been assigned a public IP address.
2. **Configuration 2:** Your VTC codec(s) has been assigned a public IP address and is routing through the district's LAN.
3. **Configuration 3:** Your VTC codec(s) has been assigned a private IP address and is routing through the district's network to the ENA router and obtaining a public IP address on the ENA router.

Depending on the VTC Configuration that is currently deployed at your district, you will follow one of the following paths.

STEP 6a for Configuration 1 Districts: Your VTC codec(s) is connected directly into the ENA Router and has been assigned a public IP address.

IMPORTANT: In order to provide you with optimal assistance the district will need to maintain the circuit connection to ENA until the VTC codec(s) has been re-configured.

1. While the ENA circuit is still active (prior to you moving your district onto the new ISP public Internet), ENA will enter the new static IP, subnet mask and default gateway on the VTC codec(s).
2. If a port is available on your new ISP's equipment:
 - a. The district technical person will physically move the cable of the VTC codec(s) to the new ISP's router port.
 - b. The district technical person will need to hard re-boot the VTC codec(s) (power-off/power-on).
 - c. In some cases a VLAN was established to route the VTC traffic to the port on the ENA router, the customer will need to have the new ISP setup a VLAN for the dedicated port.
3. If the new ISP does not provide a dedicated port for the VTC codec:
 - a. The district will need to route the new IP address through their network to the VTC.
 - b. The static IP, subnet mask, and default gateway will need to be set to the new ISP on the VTC.

After you have completed your transition to your new ISP, notify your IEN Specialist to complete your VTC transition.

1. ENA will complete a test call to validate inbound and outbound connectivity. If there are any issues, ENA will recommend suggested changes for you to work with your ISP to address.
2. ENA will update the management suite and push an updated phone book to all active VTC s in the state.
3. IEN will test connect to and from each transitioned VTC codec over new connection.
 - a. Requires person in VTC room at the school
4. District will test connect to each location that routinely participates in a class with the newly transitioned VTC.

STEP 6b for Configuration 2: Your VTC codec(s) has been assigned a public IP address and is routing through the districts LAN.

IMPORTANT: In order to provide you with optimal assistance, the district will need to maintain the circuit connection to ENA until the VTC codec(s) has been re-configured.

1. While the ENA circuit is still active (prior to you moving your district onto the new ISP public Internet), ENA will enter the new static IP, subnet mask and default gateway on the VTC codec(s). If you transition your network to you're new ISP before transitioning you're VTC codec you will have to perform a manual transition.
2. If going through a firewall, the district will need to ensure all necessary ports are opened for the new VTC address (See firewall port settings below.)
3. The district technical person will need to hard re-boot the VTC codec(s) (power-off/power-on).

After you have completed your transition to your new ISP, notify your IEN Specialist to complete your VTC transition.

1. ENA will complete a test call to validate inbound and outbound connectivity. If there are any issues, ENA will recommend suggested changes for you to work with your ISP to address.
2. ENA will update the management suite and push an updated phone book to all active VTC s in the state.
3. IEN will test connect to and from each transitioned VTC codec over new connection
 - a. Requires person in VTC room at the school
4. District will test connect to each location that routinely participates in a class with the newly transitioned VTC

STEP 6c for Configuration 3: Your VTC codec(s) has been assigned a private IP address and is routing through the district's network to the ENA router and obtaining a public IP address on the ENA router.

1. The new ISP will need to setup a route for the new IP address from the new ISP equipment:
 - a. If routing is done by a customer firewall the customer will need to update the NAT translation and firewall rules for the new public address for the VTC .
 - i. If going through a firewall, the customer will need to ensure all necessary ports are opened for the new static IP address (See firewall settings below).
 - b. If routing is done by the ISP router through the customers LAN, the ISP will need to setup the route.
 - c. If the new provider is doing NAT then the NAT rules will need to be setup on the new ISP's equipment, as long as the internal private IP address does not change.
 - i. If the new provider is not providing NAT, then the customer will need to have a NAT capable device (firewall or router) provide NAT for the private IP addresses assigned to the unit.
2. The district technical person will need to hard re-boot the VTC codec(s) (power-off/power-on).

After you have completed your transition to your new ISP, notify your IEN Specialist to complete your VTC transition.

1. ENA will complete a test call to validate inbound and outbound connectivity. If there are any issues, ENA will recommend suggested changes for you to work with your ISP to address.
2. ENA will update the management suite and push an updated phone book to all active VTC s in the state.
3. IEN will test connect to and from each transitioned VTC codec over new connection
 - i. Requires person in VTC room at the school
4. District will test connect to each location that routinely participates in a class with the newly transitioned VTC

Firewall Settings for Configuration 3

To ensure connectivity with a new ISP or a new firewall, specific ports and rules must be enabled to the IP address of the VTC Codec. These are the common ports:

Port	Type	Description
80	Static TCP	HTTP Web Interface
389	Static TCP	LDAP
443	Static TCP	HTTPS & Port Tunnelling
1718	Static UDP	Gatekeeper Discovery
1719	Static UDP	Gatekeeper RAS
1720	Static TCP	H.323 Call Setup
2253 - 2263	TCP	Sony endpoints
2326 - 2485	UDP	Cisco/Tandberg endpoints
3230 - 3250	TCP & UDP	RealPresence Desktop
3230 - 3235	TCP	Polycom HDX series
3230 - 3280	UDP	Polycom HDX series
3230 - 3241	TCP	RealPresence Group
3230 - 3291	UDP	RealPresence Group
5001	TCP & UDP	Polycom PPCIP client
5004 - 6004	TCP & UDP	ClearOne endpoints
5555 - 5574	TCP	Cisco/Tandberg endpoints

9400 - 9406	TCP & UDP	AudiSoft endpoints
9800 - 9806	TCP	AudiSoft Server/Gateway
9810 - 9822	UDP	AudiSoft Server/Gateway
22136	Static TCP	MXM endpoint administration
49152-49239	UDP	Sony endpoints
60000-64999	TCP & UDP	Lifesize endpoints
1024 - 65535	Dynamic TCP	H.245 (Call Parameters)
1024 - 65535	Dynamic UDP	RTP (Video Stream Data)
1024 - 65535	Dynamic UDP	RTP (Audio Stream Data)
1024 - 65535	Dynamic UDP	RTCP (Control Information)